

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: G3-1802-639-5

Luminaire Tested: S124DRP-S795D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: G3-1802-639-5  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-S795D835-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

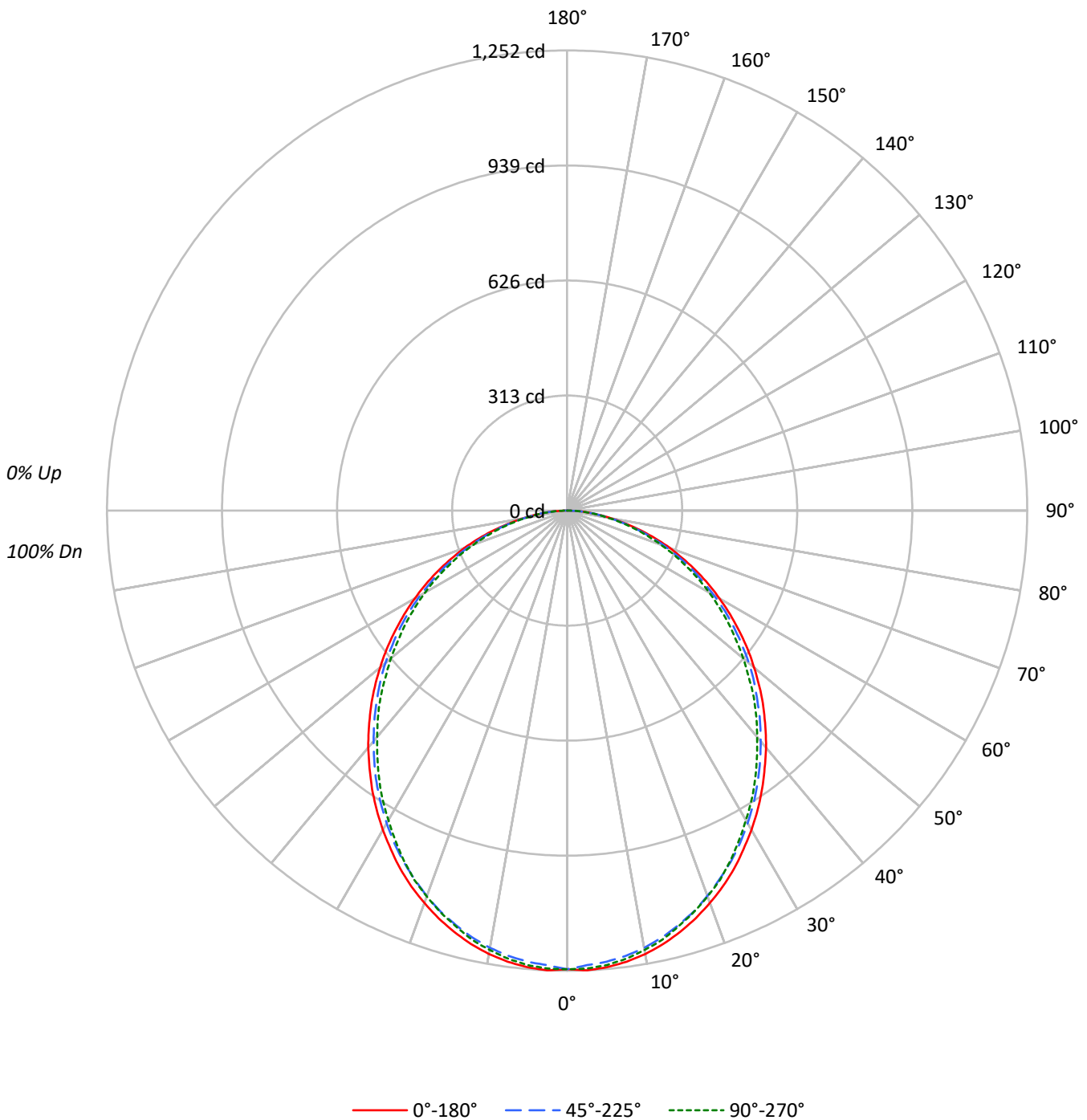
Lumens per Lamp: N/A  
Luminaire Lumens: 3203.2 lumens  
Efficiency: N/A  
Efficacy: 121.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct

Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20																		
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																												
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																												
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51																												
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44																												
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39																												
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25																												

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11093	11093	11093
5°	11127	10993	11073
10°	11057	10903	10958
15°	10923	10748	10776
20°	10746	10557	10566
25°	10543	10337	10308
30°	10295	10079	9987
35°	10038	9810	9679
40°	9770	9503	9329
45°	9491	9202	9026
50°	9182	8933	8657
55°	8849	8586	8307
60°	8516	8196	7947
65°	8140	7824	7509
70°	7719	7329	7043
75°	7075	6731	6560
80°	6296	6040	5887
85°	5507	5303	5201

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9491 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.6	3.7
10°-20°	331.4	10.3
20°-30°	487.7	15.2
30°-40°	567.0	17.7
40°-50°	566.9	17.7
50°-60°	495.8	15.5
60°-70°	368.1	11.5
70°-80°	208.9	6.5
80°-90°	59.8	1.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	936.8	29.2
0°-40°	1503.7	46.9
0°-60°	2566.4	80.1
0°-90°	3203.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3203.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1248	1248	1248	1248	1248	
5°	1247	1243	1232	1243	1241	118
15°	1187	1183	1168	1174	1171	335
25°	1075	1068	1054	1055	1051	495
35°	925	918	904	897	892	578
45°	755	748	732	721	718	582
55°	571	568	554	542	536	511
65°	387	382	372	362	357	383
75°	206	201	196	192	191	219
85°	54	54	52	52	51	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1248	1248	1248	1248	1248
2.5°	1252	1249	1238	1248	1247
5°	1247	1243	1232	1243	1241
7.5°	1238	1234	1222	1231	1230
10°	1225	1221	1208	1216	1214
12.5°	1208	1204	1190	1199	1196
15°	1187	1183	1168	1174	1171
17.5°	1163	1158	1144	1148	1146
20°	1136	1131	1116	1119	1117
22.5°	1107	1100	1085	1091	1087
25°	1075	1068	1054	1055	1051
27.5°	1039	1032	1019	1017	1012
30°	1003	995	982	978	973
32.5°	965	958	944	939	934
35°	925	918	904	897	892
37.5°	883	877	862	855	848
40°	842	834	819	809	804
42.5°	798	794	777	765	762
45°	755	748	732	721	718
47.5°	710	705	690	678	670
50°	664	660	646	632	626
52.5°	619	614	599	587	579
55°	571	568	554	542	536
57.5°	526	523	509	497	491
60°	479	474	461	452	447
62.5°	433	429	415	407	402
65°	387	382	372	362	357
67.5°	340	336	326	316	315
70°	297	290	282	274	271
72.5°	251	244	238	232	229
75°	206	201	196	192	191
77.5°	162	160	155	154	151
80°	123	120	118	116	115
82.5°	85	84	84	83	82
85°	54	54	52	52	51
87.5°	26	25	24	24	24
90°	0	0	0	0	0



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	19.66	21.27	20.02	21.59	21.90	19.28	20.90	19.65	21.21	21.53
	3H	21.42	22.88	21.80	23.20	23.56	21.00	22.45	21.37	22.78	23.14
	4H	22.07	23.45	22.47	23.79	24.17	21.64	23.01	22.04	23.36	23.74
	6H	22.55	23.82	22.96	24.19	24.58	22.12	23.39	22.53	23.75	24.14
	8H	22.70	23.91	23.12	24.30	24.70	22.27	23.49	22.70	23.88	24.28
	12H	22.80	23.97	23.23	24.35	24.78	22.38	23.55	22.81	23.93	24.36
4H	2H	20.23	21.60	20.63	21.95	22.33	19.93	21.31	20.33	21.65	22.03
	3H	22.21	23.36	22.62	23.76	24.16	21.86	23.01	22.27	23.41	23.81
	4H	22.99	24.03	23.42	24.45	24.88	22.63	23.67	23.06	24.08	24.52
	6H	23.60	24.50	24.05	24.95	25.40	23.23	24.14	23.69	24.58	25.04
	8H	23.79	24.64	24.25	25.09	25.55	23.44	24.29	23.90	24.73	25.19
	12H	23.95	24.71	24.43	25.18	25.65	23.59	24.35	24.07	24.83	25.30
8H	4H	23.27	24.12	23.73	24.56	25.03	22.95	23.80	23.41	24.24	24.71
	6H	23.99	24.70	24.48	25.19	25.66	23.67	24.38	24.17	24.87	25.34
	8H	24.26	24.90	24.77	25.40	25.89	23.95	24.59	24.46	25.09	25.58
	12H	24.49	25.05	25.00	25.54	26.10	24.18	24.75	24.69	25.24	25.80
12H	4H	23.30	24.06	23.78	24.54	25.01	22.98	23.75	23.46	24.22	24.69
	6H	24.04	24.68	24.55	25.18	25.67	23.73	24.37	24.24	24.87	25.36
	8H	24.37	24.93	24.87	25.42	25.98	24.07	24.63	24.58	25.12	25.68